

NOTES 1) Suffix a on edge connector denotes component side b denotes non-component side.

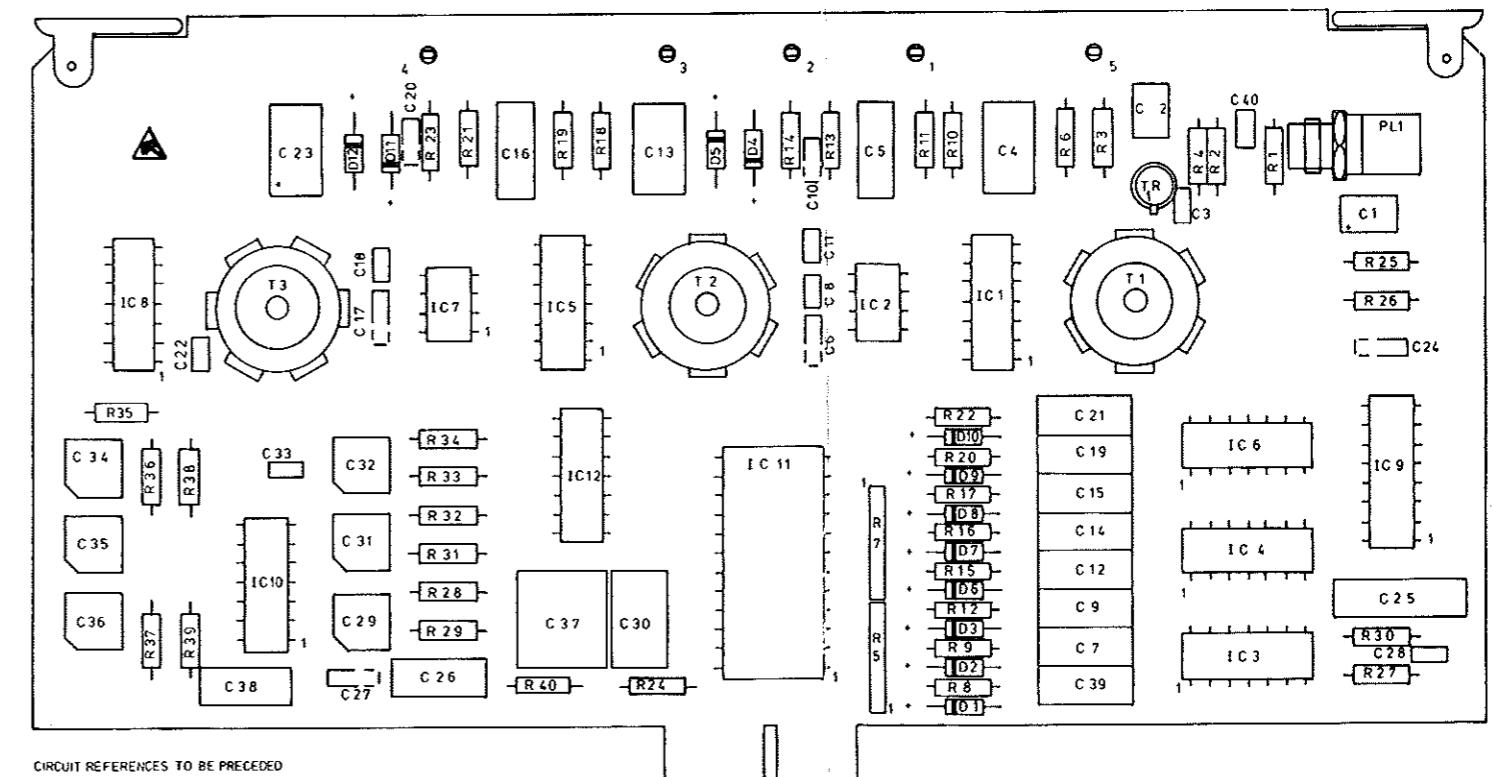
10) INPUT 10kHz (-90 to -20dB)

11) FROM LEVEL RANGE SW VIA INTERCONNECTION BOARD

12) FROM FRONT PANEL SWITCHES

13) POWER SUPPLY

14) TO INPUT UNIT ASSEMBLY



**Fig. 17 Component Layout, I.F. Amplifier/EPROM, (27)**

**ASSEMBLY P.C.B. A83 METER and DEMODULATOR**

REF.	VALUE	TOL. ± %	RATING	TYPE	PART NO.	REF.	VALUE	TOL. ± %	RATING	TYPE	PART NO.	REF.	VALUE	TOL. ± %	RATING	TYPE	PART NO.
R1	825R	1	0W35	MF	0001-0001.154/-	R58	1k	1	0W35	MF	0001-0001.219/-	C21	4n7	2	63	PF	0000-7598.528/-
R2	10k	1	0W35	MF	0001-0002.137/-	R59	3M3	5	0W25	MF	0001-0007.336/-	C22	2n2	2	63	Tant.	0000-7573.695/-
R3	56k2	1	0W35	MF	0001-0002.797/-	R60	47R	2	0W25	MF	0000-7601.321/-	C23	1n	10	63	Cer.	0001-0004.698/-
R4	10k	1	0W35	MF	0001-0002.137/-	R61	100k	1	0W35	MF	0001-0002.991/-	C24	1μ	20	35	Tant.	0001-0040.704/-
R5	270k	2	0W25	MF	0000-7601.363/-	R62	10k	1	0W35	MF	0001-0002.137/-	C25	56p	2	63	Cer.	0001-0004.423/-
R6	10k	1	0W35	MF	0001-0002.137/-	R63	12k1	1	0W35	MF	0001-0002.218/-	C26	22μ	20	16	Tant.	0001-0040.966/-
R7	61k9	1	0W35	MF	0001-0002.836/-	R64	2k	1	0W35	MF	0001-0001.455/-	C27	470n	10	100	PE	0001-0010.446/-
R8	24k	1	0W35	MF	0000-7601.334/-	R65	33R	2	0W25	MF	0000-7601.347/-	C28	1μ	20	35	Tant.	0001-0040.704/-
R9	6k81	1	0W35	MF	0001-0001.976/-	R66	4k7	2	0W25	MF	0001-0001.811/-	C29	3n3	10	63	Cer.	0001-0004.779/-
R10	68R1	1	0W35	MF	0001-0000.427/-	R67	4k99	0.1	0W125	MF	0000-7512.724/-	C30	10μ	20	25	Tant.	0001-0040.885/-
R11	3k3	2	0W25	MF	4980-0000.012/-	R68	56k2	1	0W35	MF	0001-0002.797/-	C31	100μ	20	10	Tant.	0001-0041.156/-
R12	221R	1	0W35	MF	0001-0000.715/-	R69	35k7	1	0W35	MF	0001-0002.616/-	C32	33p	2	100	Cer.	0001-0004.342/-
R13	10k	1	0W35	MF	0001-0002.137/-	R70	100k	1	0W35	MF	0001-0002.991/-	C33	100n	10	100	PE	0001-0010.365/-
R14	10k	1	0W35	MF	0001-0002.137/-	R71	5k11	1	0W35	MF	0001-0001.853/-	C35	100n	10	100	PE	0001-0010.365/-
R15	68R1	1	0W35	MF	0001-0000.427/-	R72	5k11	1	0W35	MF	0001-0001.853/-	C36	4μ7	20	10	Tant.	0001-0040.801/-
R16	100R	1	0W35	MF	0001-0000.537/-	R78	10k	2	0W125	RESISTOR NETWORK	0000-7602.760/-	C37	100n	10	100	PE	0001-0010.365/-
R17	3k3	2	0W25	MF	4980-0000.012/-	R79	51k1	1	0W35	MF	0001-0002.768/-	C38	1μ	20	35	Tant.	0001-0040.704/-
R18	330R	2	0W25	MF	0000-7601.389/-	R80	11k	1	0W35	MF	0001-0002.179/-	C39	1μ	20	35	Tant.	0001-0040.704/-
R19	10k	1	0W35	MF	0001-0002.137/-	R81	11k	1	0W35	MF	0001-0002.179/-	C40	10n	20	40	Cer.	0001-0004.818/-
R20	1k	1	0W35	MF	0001-0001.219/-	R82	39k2	1	0W35	MF	0001-0002.658/-	C41	22n	10	100	PF	0001-0010.255/-
R21	221R	1	0W35	MF	0001-0000.715/-	R83	24k3	1	0W35	MF	0001-0002.470/-	C42	15n	10	100	PF	0001-0010.239/-
R22	1k8	2	0W25	MF	0001-0014.510/-	R84	1k	1	0W35	MF	0001-0001.219/-	C43	47n	10	100	PF	0001-0010.310/-
R23	68R1	1	0W35	MF	0001-0000.427/-	R85	1k	1	0W35	MF	0001-0001.219/-	C44	22n	10	100	PF	0001-0010.255/-
R24	470R	2	0W25	MF	0000-7560.608/-	R86	137k	1	0W35	MF	0001-0003.084/-	C45	47μ	20	6.3	Tant.	0001-0041.059/-
R25	432R	1	0W35	MF	0001-0000.935/-	R87	604R	1	0W35	MF	0001-0001.031/-	C46	1μ	20	35	Tant.	0001-0040.704/-
R26	221R	1	0W35	MF	0001-0000.115/-	R88	33R	2	0W25	MF	0000-7601.347/-	C48	33μ	20	10	Tant.	0001-0040.995/-
R27	10k	1	0W35	MF	0001-0002.137/-	R90	10k	1	0W35	MF	0001-0002.137/-	C49	33p	2	100	Cer.	0001-0004.342/-
R28	10k	1	0W35	MF	0001-0002.137/-	R91	10k	1	0W35	MF	0001-0002.137/-	C50	270p	2	63	Cer.	0001-0004.627/-
R29	33R	2	0W25	MF	0000-7601.347/-	R92	68R1	1	0W35	MF	0001-0000.427/-	C51	270p	2	63	Cer.	0001-0004.627/-
R30	90R9	1	0W35	MF	0001-0000.511/-	R93	2k2	1	0W35	MF	0001-0001.497/-	C52	1n	10	63	Cer.	0001-0004.698/-
R31	10k	1	0W35	MF	0001-0002.137/-	R94	12k1	1	0W35	MF	0001-0002.218/-	C53	10n	20	40	Cer.	0001-0004.818/-
R32	33R	2	0W25	MF	0000-7601.347/-	R95	1k	1	0W35	MF	0001-0001.219/-	C54	22n	20	40	Cer.	0001-0006.418/-
R33	5k11	1	0W35	MF	0001-0001.853/-	R96	8k25	1	0W35	MF	0001-0002.056/-	C55	33μ	1	40	Tant.	0001-0040.995/-
R34	392R	1	0W35	MF	0001-0000.896/-	R97	243R	1	0W35	MF	0001-0000.731/-	C56	22n	20	40	Cer.	0001-0006.418/-
R35	392R	1	0W35	MF	0001-0000.896/-	R98	100k	1	0W35	MF	0001-0002.991/-	C57	1n	20	100	Cer.	0001-0004.698/-
R36	56R2	1	0W35	MF	0001-0000.346/-	R99	100R	1	0W35	MF	0001-0000.537/-	C58	4n7	10	63	Cer.	0001-0004.795/-
R37	5k11	1	0W35	MF	0001-0001.853/-	R100	16k2	1	0W35	MF	0001-0002.315/-	C59	180p	2	63	Cer.	0001-0004.591/-
R38	56R2	1	0W35	MF	0001-0000.346/-	C1	100n	10	100	PE	0001-0010.365/-	TR1				BC109	0000-7602.029/-
R39	1k	1	0W35	MF	0001-0001.219/-	C2	100n	10	100	PE	0001-0010.365/-	TR2				BC109	0000-7602.029/-
R40	68R1	1	0W35	MF	0001-0000.427/-	C3	22μ	20	16	Tant.	0001-0040.966/-	TR3				2N2369A	0000-7542.066/-
R41	1k21	1	0W35	MF	0001-0001.277/-	C4	1μ	10	100	PE	0001-0010.501/-	TR4				2N3251	0001-0017.342/-
R42	5k11	1	0W35	MF	0001-0001.853/-	C5	4μ7	20	10	Tant.	0001-0040.801/-	TR5				2N2369A	0000-7542.066/-
R43	68R1	1	0W35	MF	0001-0000.427/-	C6	33p	2	63	Cer.	0001-0004.342/-	TR6				BC 109	0000-7602.029/-
R44	5k11	1	0W35	MF	00												

REF.	VALUE	TOL. ±%	RATING	TYPE	PART NO.
IC4			3039		0001-0016.314/-
IC5			3130		0001-0069.918/-
IC6			ZN 423 T		0000-7601.923/-
IC7			4066		0001-0067.554/-
IC8			3130		0001-0069.918/-
IC9			4013		0001-0015.991/-
IC10			4066		0001-0067.554/-
IC12			3403		0000-7513.309/-
IC13			4066		0001-0067.554/-
IC14			4024		0001-0016.039/-
IC15			4018		0001-0068.760/-
XL1	6.144MHz		CRYSTAL		0000-7602.715/-
RL1			RSD - 12V		0001-0069.620/-
RL2			RSD - 12V		0001-0069.620/-
L1	51.5mH		INDUCTOR		4502-1436.003/4
L2	51.5mH		INDUCTOR		4502-1436.003/4
PL1			CONNECTOR ELBOW PC		0000-2687.065/6
PL2			HOUSING COAX. SKT.		
			BULKHEAD		0000-2686.008/5
			MOUNTING SPACER RING		0000-2687.078/5
			SCREW		0000-1637.058/5
A83			P.C.B. METER and DEMODULATOR		4502-0283.008/2



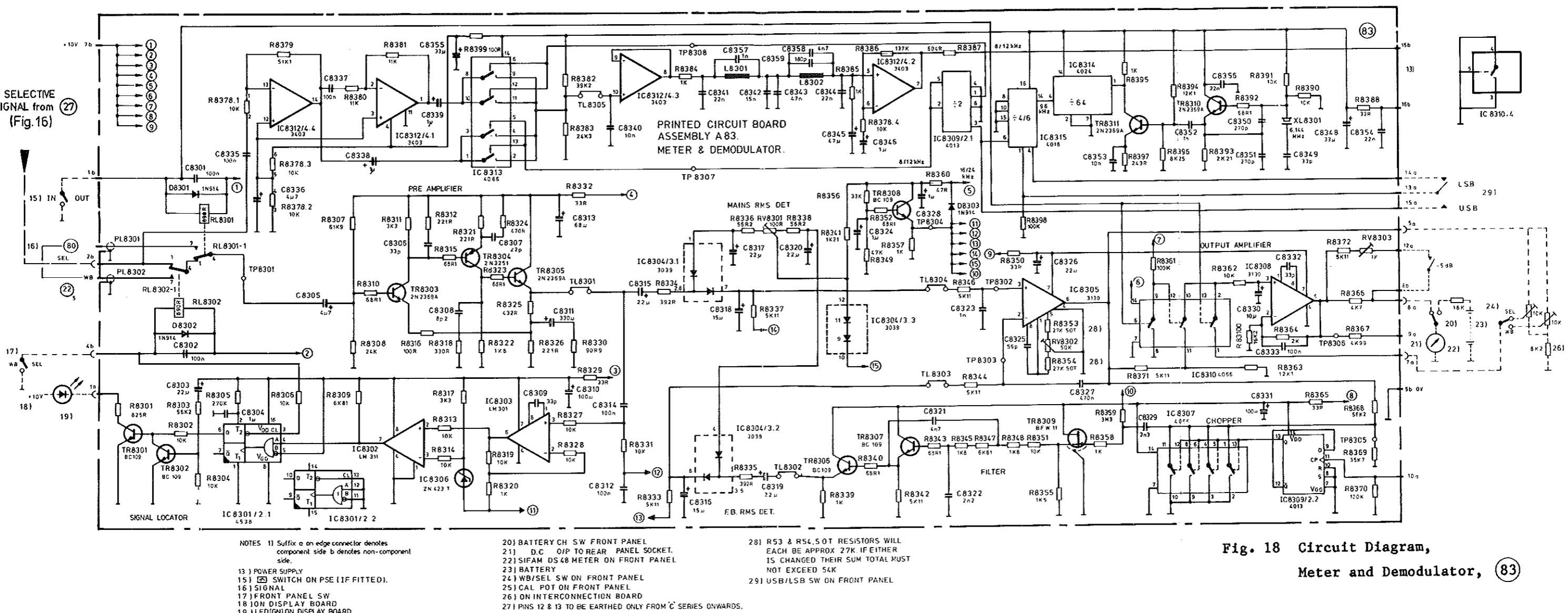
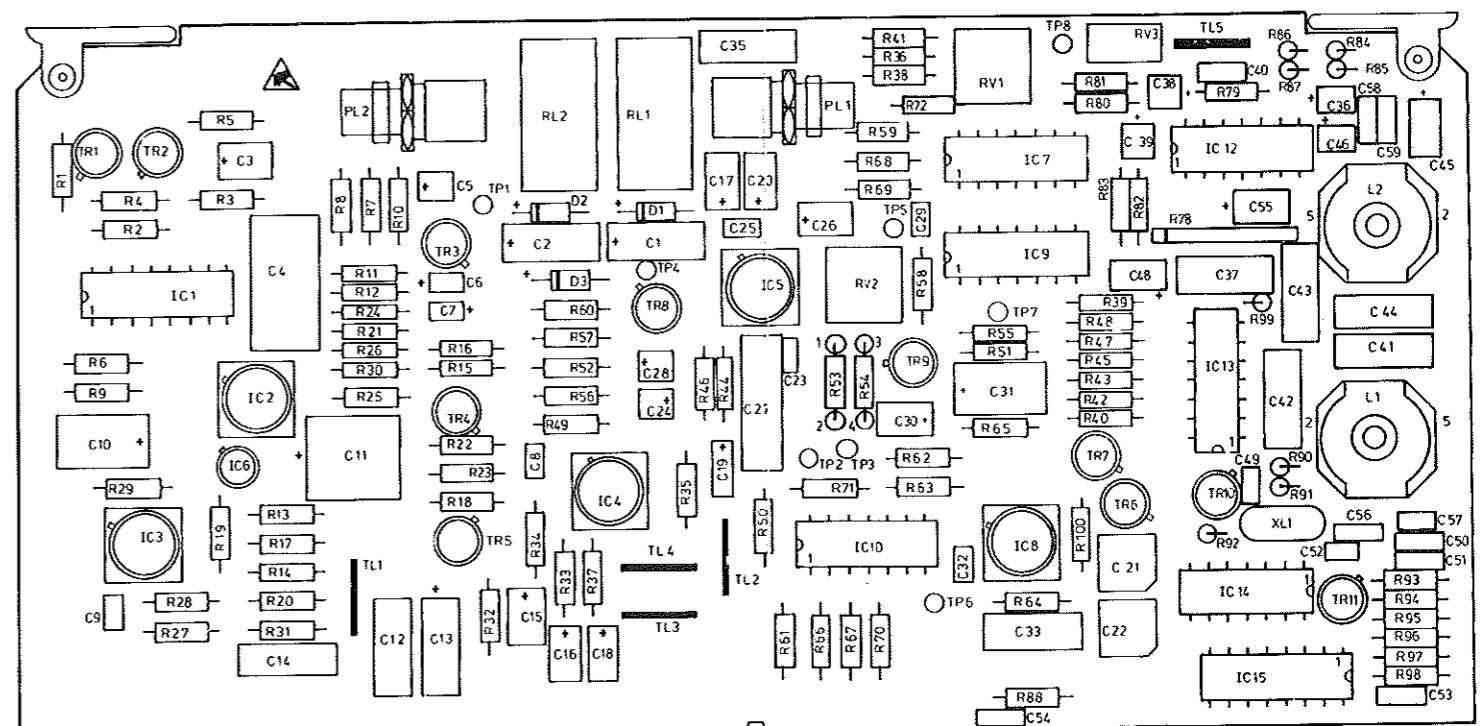
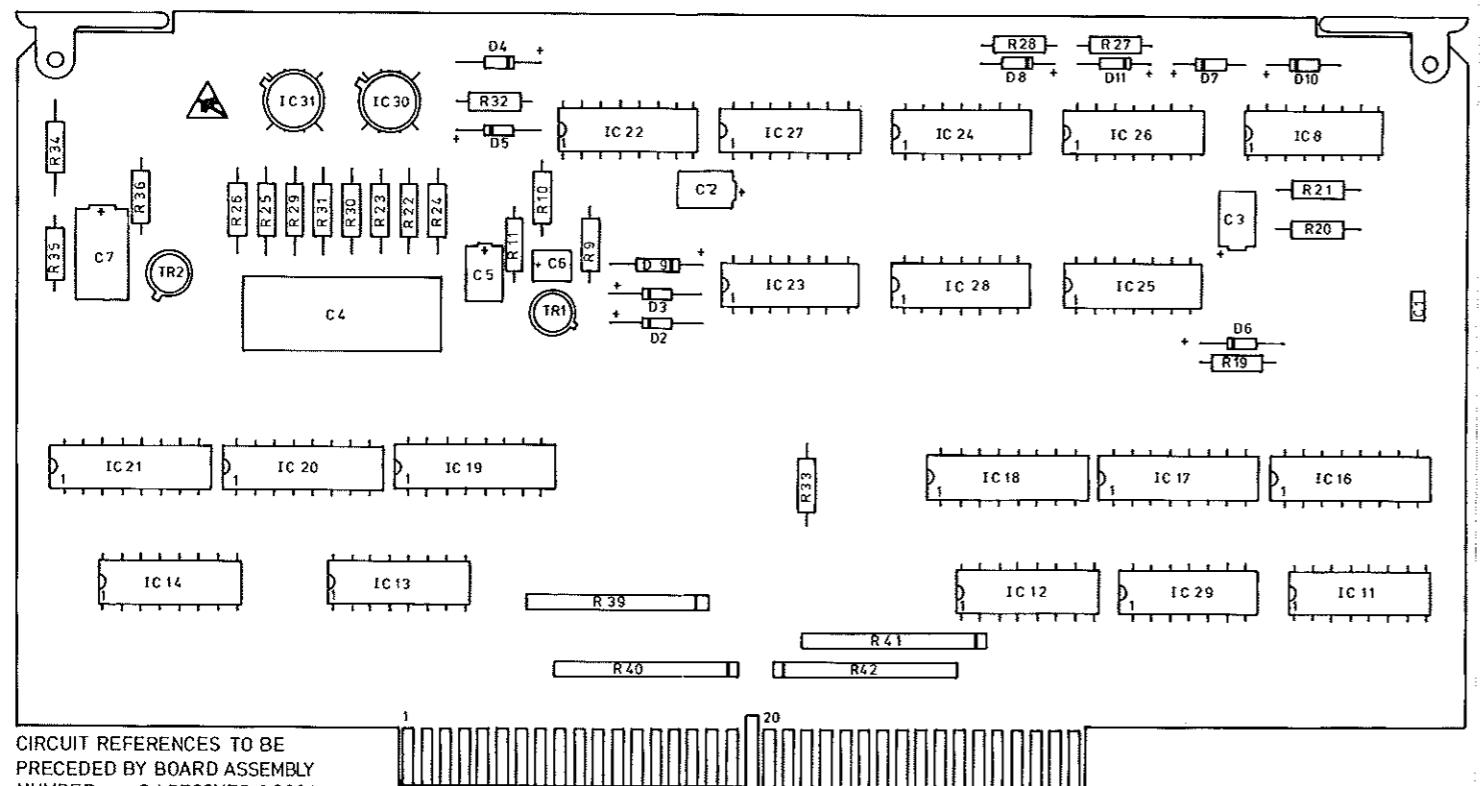


Fig. 18 Circuit Diagram,  
Meter and Demodulator, (83)



COMPONENT REFERENCES TO BE PRECEDED BY  
BOARD ASSEMBLY NUMBER.  
e.g. R19 BECOMES R8319  
C9 BECOMES C8309

Fig. 19 Component Layout,  
Meter and Demodulator, (83)



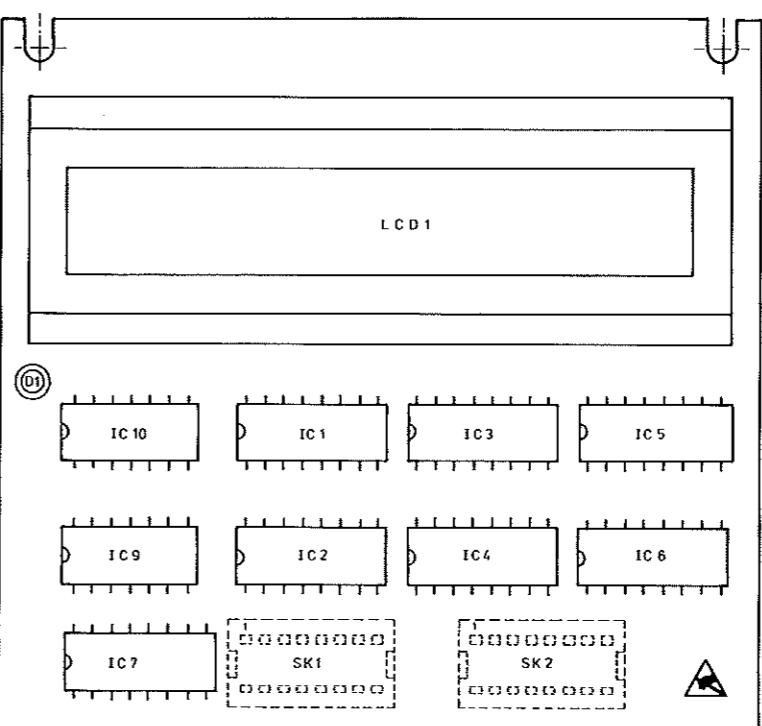
CIRCUIT REFERENCES TO BE  
PRECEDED BY BOARD ASSEMBLY  
NUMBER eg C4 BECOMES C2904  
IC13 BECOMES IC2913

Fig. 20 Component Layout, Frequency Control, (29)

ASSEMBLY P.C.B. A29 FREQUENCY CONTROL

REF.	VALUE	TOL. ± %	RATING	TYPE	PART NO.
R9	39R2	1	0W35	MF	0001-0003.547/-
R10	221k	1	0W35	MF	0001-0003.217/-
R11	56k2	1	0W35	MF	0001-0002.797/-
R19	56k2	1	0W35	MF	0001-0002.797/-
R20	100R	1	0W35	MF	0001-0000.537/-
R21	562k	1	0W35	CF	0001-0003.408/-
R22	27k	2	0W25	MF	0000-7558.377/-
R23	100k	1	0W35	MF	0001-0002.991/-
R24	82R5	1	0W35	MF	0001-0000.472/-
R25	1M2	5	0W35	CF	0001-0007.297/-
R26	1M2	5	0W35	CF	0001-0007.297/-
R27	301k	1	0W35	MF	0001-0062.025/-
R28	33k	2	0W25	MF	4980-0000.009/-
R29	82R5	1	0W35	MF	0001-0000.472/-
R30	221k	1	0W35	MF	0001-0003.217/-
R31	27k	2	0W25	MF	0000-7558.377/-
R32	7k5	1	0W35	MF	0001-0002.014/-
R33	825R	1	0W35	MF	0001-0001.154/-
R34	562k	1	0W35	CF	0001-0003.408/-
R35	56k2	1	0W35	MF	0001-0002.797/-
R36	301k	1	0W35	MF	0001-0062.025/-
R38				IC15	
R39	10 x 100k	2	0W2	RESISTOR PACK	0000-7604.441/-
R40	10 x 100k	2	0W2	RESISTOR PACK	0000-7604.441/-
R41	10 x 100k	2	0W2	RESISTOR PACK	0000-7604.441/-
R42	10 x 100k	2	0W2	RESISTOR PACK	0000-7604.441/-
C1	1n	20	100	Cer.	0000-7602.809/-
C2	33μ	20	10	Tant.	0001-0040.995/-
C3	33μ	20	10	Tant.	0001-0040.995/-

REF.	VALUE	TOL. ± %	RATING	TYPE	PART NO.
C4	3μ3	10	63	Tant.	0000-7601.606/-
C5	33μ	20	10	Tant.	0001-0040.995/-
C6	4μ7	20	10	Tant.	0001-0040.801/-
C7	100μ	20	10	Tant.	0001-0041.156/-
TR1				BCY71	0001-0016.534/-
TR2				BC109	0000-7602.029/-
D2				1N914 or 1N4448	0001-0018.493/-
D3				1N914 or 1N4448	0001-0018.493/-
D4				1N914 or 1N4448	0001-0018.493/-
D5				1N914 or 1N4448	0001-0018.493/-
D6				1N914 or 1N4448	0001-0018.493/-
D7				1N914 or 1N4448	0001-0018.493/-
D8				1N914 or 1N4448	0001-0018.493/-
D9				BZ188C8V2	0001-0019.036/-
D10				1N914 or 1N4448	0001-0018.493/-
D11				1N914 or 1N4448	0001-0018.493/-
IC8				4040	0001-0065.462/-
IC11				4503	0000-7548.853/-
IC12				4503	0000-7548.853/-
IC13				4503	0000-7548.853/-
IC14				4503	0000-7548.853/-
IC15					
IC16				4510	0001-7548.650/-
IC17				4510	0001-7548.650/-
IC18				4510	0001-7548.650/-
IC19				4510	0001-7548.650/-
IC20				4510	0001-7548.650/-
IC21				4510	0001-7548.650/-
IC22				4715	0000-7529.416/-



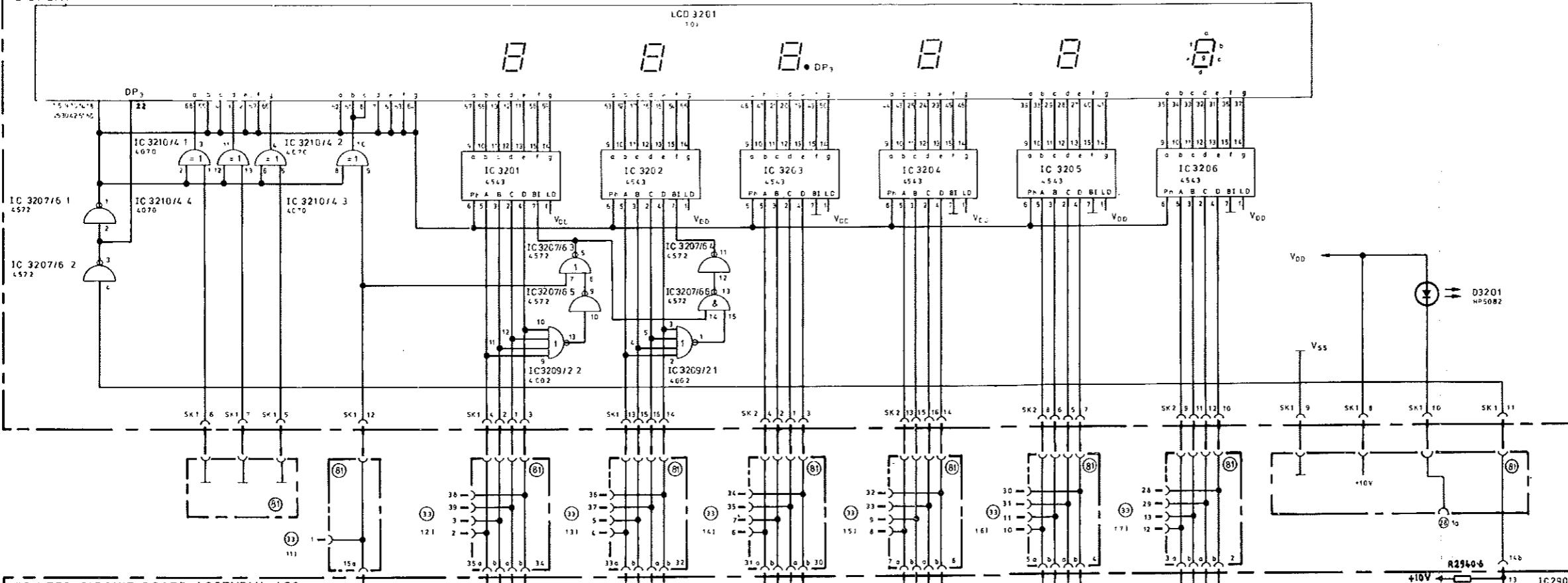
CIRCUIT REFERENCES TO BE  
PRECEDED BY BOARD ASSEMBLY  
NUMBER eg IC2 BECOMES IC3202.

Fig. 21 Component Layout, Frequency Display, (32)

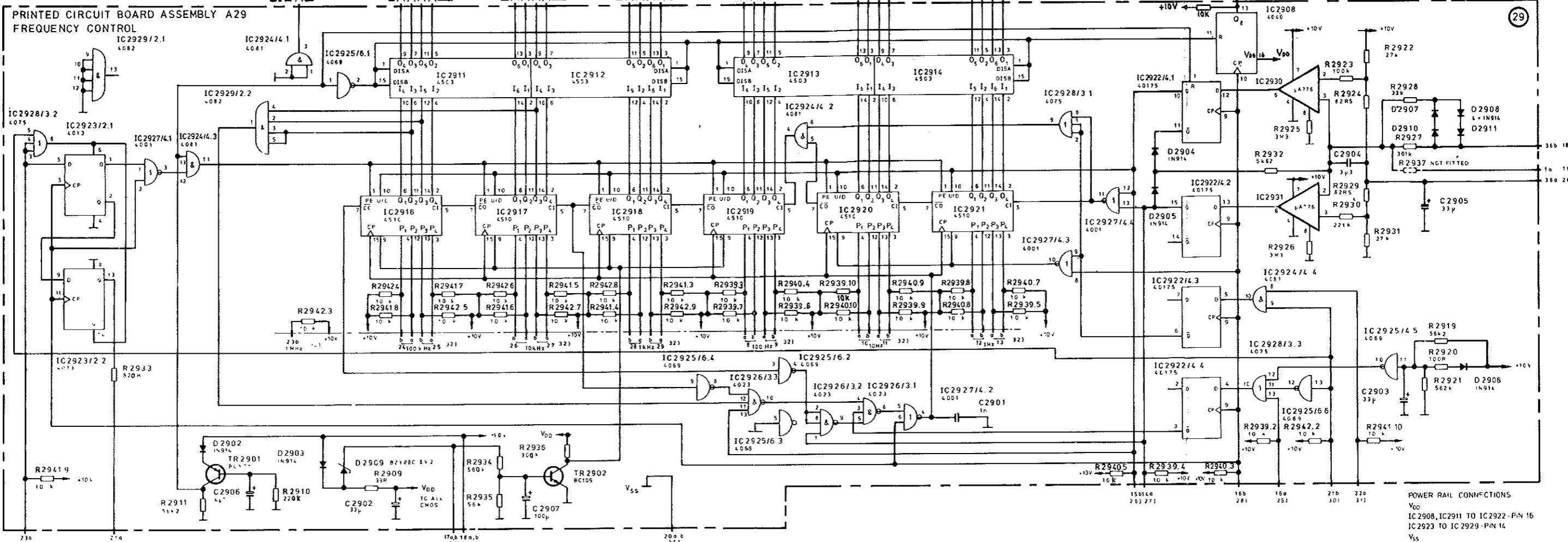
ASSEMBLY P.C.B. A32 DISPLAY BOARD

REF.	VALUE	TOL. ± %	RATING	TYPE	PART NO.
DI				LED 5082 - 4955	0000-7599.925/-
IC1				4543	0001-0068.618/-
IC2				4543	0001-0068.618/-
IC3				4543	0001-0068.618/-
IC4				4543	0001-0068.618/-
IC5				4543	0001-0068.618/-
IC6				4543	0001-0068.618/-
IC7				4572	0001-0068.540/-
IC9				4002	0001-0067.570/-
IC10				4070	0001-0071.029/-
SK1				SOCKET D.I.L. 16-WAY 0000-7518.391/-	
SK2				SOCKET D.I.L. 16-WAY 0000-7518.391/-	
LCD1				LCD 930-080-S-RF-P2H 0000-7591.114/-	
A32				P.C.B. DISPLAY BOARD 4502-0132.007/2	

PRINTED CIRCUIT BOARD ASSEMBLY A32  
DISPLAY



PRINTED CIRCUIT BOARD ASSEMBLY A29  
FREQUENCY CONTROL



NOTES 1) Suffix a on edge connector denotes component side b denotes non-component side

10) LIQUID CRYSTAL DISPLAY  
11) DIVI 1 MHz  
12) 100 kHz  
13) 10 kHz  
14) 1 kHz  
15) 100 Hz  
16) 10 Hz  
17) 1 Hz  
18) To motor M

19) Not connected  
20) To motor M  
21) DAY  
22) DAC  
23) U<sub>BATT</sub>  
24) +10V  
25) GND  
26) To DIVI UP  
27) To DIVI DN  
28) To DIVI DAW  
29) To SW LOCK  
30) To SW REM  
31) To SA COR/FINE  
32) To back panel connector, not fitted

Fig. 22  
Circuit Diagram, Frequency Control, (29)  
and Frequency Display (32)

**ASSEMBLY P.C.B. A30 CALIBRATION**

REF.	VALUE	TOL. ± %	RATING	TYPE	PART NO.	REF.	VALUE	TOL. ± %	RATING	TYPE	PART NO.	REF.	VALUE	TOL. ± %	RATING	TYPE	PART NO.
R1	15k	1	0W35	MF	0001-0002.289/-	R60	1k	1	0W35	MF	0001-0001.219/-	C33	100n	20	100	Cer.	0000-7598.450/-
R2	3k3	2	0W25	MF	4980-0000.012/-	R61	5k62	1	0W35	MF	0001-0001.895/-	C34	10n	20	40	Cer.	0001-0004.818/-
R3	68R1	1	0W35	MF	0001-0000.427/-	R62	39k2	1	0W35	MF	0001-0002.658/-	C35	100n	20	100	Cer.	0000-7598.450/-
R4	4k7	2	0W25	MF	0001-0001.811/-	R63	1k5	1	0W35	MF	0001-0001.358/-	C36	100n	20	100	Cer.	0000-7598.450/-
R5	6k81	1	0W35	MF	0001-0001.976/-	R64	5k62	1	0W35	MF	0001-0001.895/-	C37	100n	20	100	Cer.	0000-7598.450/-
R6	10k	1	0W35	MF	0001-0002.137/-	R65	47R	2	0W25	MF	0001-7601.321/-	C38	100n	20	100	Cer.	0000-7598.450/-
R7	68R1	1	0W35	MF	0001-0000.427/-	R66	470R	2	0W25	MF	0000-7560.608/-	C39	100n	20	100	Cer.	0000-7598.450/-
R8	68R1	1	0W35	MF	0001-0000.427/-	R67	2k21	1	0W35	MF	0001-0001.497/-	C40	10μ	20	25	Tant.	0000-0040.885/-
R9	1k82	1	0W35	MF	0001-0001.413/-	R68	33k	2	0W25	MF	4980-0000.009/-	TR1					2N2369A 0000-7542.066/-
R10	121R	1	0W35	MF	0001-0000.566/-	R69	68R1	1	0W35	MF	0001-0000.427/-	TR2					2N3251 0001-0017.342/-
R11	1k	1	0W35	MF	0001-0001.219/-	R70	68k1	1	0W35	MF	0001-0002.878/-	TR3					2N2369A 0000-7542.066/-
R12	68R1	1	0W35	MF	0001-0000.427/-	R71	68R1	1	0W35	MF	0001-0000.427/-	TR4					2N2915 0001-0072.442/-
R13	357R	1	0W35	MF	0001-0000.867/-	R72	909R	2	0W25	MF	0001-0001.183/-	TR5					2N2369A 0000-7542.066/-
R14	1k	1	0W35	MF	0001-0001.219/-	R73	2k21	2	0W25	MF	0001-0001.497/-	TR6					2N2369A 0000-7542.066/-
R15	100R	1	0W35	MF	0001-0000.537/-	R74	1k1	1	0W35	MF	0001-0001.235/-	TR7					2N2369A 0000-7542.066/-
R16	698R	1	0W35	MF	0001-0001.099/-	R75	330	2	0W25	MF	0000-7601.389/-	TR8					FET BF245A 0001-0016.628/-
R17	301R	1	0W35	MF	0001-0000.799/-	R76	68k1	1	0W35	MF	0001-0002.878/-	TR9					FET BF245A 0001-0016.628/-
R18	280R	1	0W35	MF	0001-0000.773/-	R77	68R1	1	0W35	MF	0001-0000.427/-	TR10					BC109 0000-7602.029/-
R19	330R	2	0W25	MF	0000-7601.389/-	R78	33k	2	0W25	MF	4980-0000.009/-	D1					1N4448 0001-0018.493/-
R20	3k57	1	0W35	MF	0001-0001.691/-	R79	1M	1	0W35	MF	0001-0027.507/-	D2					ZPD 5V1 0001-0018.846/-
R21	6k19	1	0W35	MF	0001-0001.934/-	R80	1M	1	0W35	MF	0001-0027.507/-	D3					1N4448 0001-0018.493/-
R22	68R1	1	0W35	MF	0001-0000.427/-	R81	100k	1	0W35	MF	0001-0002.991/-	D4					1N4448 0001-0018.493/-
R23	301R	1	0W35	MF	0001-0000.799/-	R82	100k	1	0W35	MF	0001-0002.991/-	RV2	2k0	20	0W5	Var.	0000-7579.039/-
R24	68R1	1	0W35	MF	0001-0000.427/-	R83	100k	1	0W35	MF	0001-0002.991/-	IC1					CA 3086 0000-7601.952/-
R25	26R7	1	0W35	MF	0001-0000.207/-	R84	301k	2	0W25	MF	0001-0062.025/-	IC2					MC1458 0001-0014.989/-
R26	2k4	2	0W25	MF	0000-7601.415/-	C1	100n	20	100	Cer.	0000-7598.450/-	IC3					CA 3086 0000-7601.952/-
R27	2k21	1	0W35	MF	0001-0001.497/-	C2	100n	20	100	Cer.	0000-7598.450/-	IC4					CD 4066 0001-0067.554/-
R28	1k3	2	0W25	MF	0000-0001.303/-	C3	100n	20	100	Cer.	0000-7598.450/-	L1	1.5μH				INDUCTOR 4502-1412.001/4
R29	100R	1	0W35	MF	0001-0000.537/-	C4	910p	2	63	PF	0000-7598.557/-	L2	1.5μH				INDUCTOR 4502-1412.001/4
R30	68R1	1	0W35	MF	0001-0000.427/-	C5	100n	20	100	Cer.	0000-7598.450/-	L3	33μH				INDUCTOR 0000-7556.230/-
R31	432R	1	0W35	MF	0001-0000.935/-	C6	39p	2	63	Cer.	0000-0004.371/-	L4	33μH				INDUCTOR 0000-7556.230/-
R32	10R	1	0W35	MF	0001-0000.074/-	C7	910p	2	63	PF	0000-7598.557/-	L5	33μH				INDUCTOR 0000-7556.230/-
R33	47R	2	0W25	MF	0000-7601.321/-	C8	180p	2	63	Cer.	0001-0004.591/-	L6	220μH				INDUCTOR 0000-7556.337/-
R35	3k65	1	0W35	MF	0001-0001.701/-	C9	12p	2	63	Cer.	0001-0004.203/-	RL1					RSD - 12V 0001-0069.620/-
R36	76R8	1	0W35	MF	0001-0065.307/-	C10	390p	2	63	Cer.	0001-0004.656/-	RL2					RSD - 12V 0001-0069.620/-
R37	24k3	1	0W35	MF	0001-0002.470/-	C11	47p	2	63	Cer.	0001-0004.397/-	X1					MIXER A/1769/B 1769-1000.004/2
R38	1k	1	0W35	MF	0001-0001.219/-	C12	390p	2	63	Cer.	0001-0004.656/-	A30					P.C.B. CALIBRATION 4502-0130.009/2
R39	68R1	1	0W35	MF	0001-0000.427/-	C13	27p	2	63	Cer.	0001-0004.326/-						
R40	10k	1	0W35	MF	0001-0002.137/-	C14	150p	2	63	Cer.	0001-0004.575/-						
R41	698R	1	0W35	MF	0001-0001.099/-	C15	33μ	20	10	Tant.	0001-0040.995/-						
R43	750R	2	0W25	MF	0001-0001.125/-	C16	10p	2	63	Cer.	0001-0004.177/-						
R44	3k01	1	0W35	MF	0001-0001.620/-	C17	100μ	20	10	Tant.	0001-0041.156/-						
R45	4k7	2	0W25	MF	0001-0001.811/-	C18	47μ	20	16	Tant.	0001-0041.062/-						
R46	100R	1	0W35	MF	0001-0000.537/-	C19	10n	20	40	Cer.	0001-0004.818/-						
R47	100k	1	0W35	MF	0001-0002.991/-	C20	100n	20	100	Cer.	0000-7598.450/-						
R48	100k	1	0W35	MF	0001-0002.991/-	C21	68μ	20	16</								